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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 09/987,650 | 11/15/2001 | Fumiaki Miyamaru | Q66488 | 7449 |

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EXAMINER

ROJAS, OMAR R

ART UNIT

PAPER NUMBER

2874

DATE MAILED: 06/09/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Applicant(s)

09/987,650

MIYAMARU ET AL.

Examiner

Omar Rojas

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) 10-18 is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on November 15, 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____ 6) ☐ Other: ____.

DETAILED ACTION

Election/Restrictions

1. This application contains claims directed to the following patentably distinct species of the claimed invention: The species referring to Figures 1-3 and claims 1-9 readable thereon. The species referring to Figures 8-10 and claims 10-18 readable thereon.

Applicant is required under 35 U.S.C. 121 to elect a single disclosed species for prosecution on the merits to which the claims shall be restricted if no generic claim is finally held to be allowable. Currently, no claims are generic.

Applicant is advised that a reply to this requirement must include an identification of the species that is elected consonant with this requirement, and a listing of all claims readable thereon, including any claims subsequently added. An argument that a claim is allowable or that all claims are generic is considered nonresponsive unless accompanied by an election.

Upon the allowance of a generic claim, applicant will be entitled to consideration of claims to additional species which are written in dependent form or otherwise include all the limitations of an allowed generic claim as provided by 37 CFR 1.141. If claims are added after the election, applicant must indicate which are readable upon the elected species. MPEP § 809.02(a).

Should applicant traverse on the ground that the species are not patentably distinct, applicant should submit evidence or identify such evidence now of record showing the species to be obvious variants or clearly admit on the record that this is the

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case. In either instance, if the examiner finds one of the inventions unpatentable over the prior art, the evidence or admission may be used in a rejection under 35 U.S.C. 103(a) of the other invention.

2. During a telephone conversation with Tracy Johnson on May 22, 2003 a provisional election was made without traverse to prosecute the invention of Group I, claims 1-9. Affirmation of this election must be made by applicant in replying to this Office action. Claims 10-18 withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

3. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

Priority

4. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Specification

5. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

6. The abstract of the disclosure is objected to because it appears to exceed 150 words. Correction is required. See MPEP § 608.01(b).
7. The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

Claim Rejections - 35 USC § 102

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

9. **Claim 1 is rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent No. 4,714,326 to Usui et al. (hereinafter "Usui").**

Regarding claim 1, Usui disclosed the claimed invention as seen in Figures 1A-1B including a waveguide (1), a flexible transmitting member (3); a gap (8); and a modulation device (4).

10. **Claims 1-7 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent No. 5,771,321 to Stern.**

Regarding claims 1-5, Stern discloses an optical modulator comprising: a

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waveguide 12, a flexible light transmitting member (28) which may comprise an electrically conductive foil material and is brought into contact with the waveguide using static electricity, a light source (14) which emits light diffusing in a direction orthogonal to an arrangement direction of the flexible member 28. See columns 12-13 and Figures 4c-4d. Stern further shows in Figures 9 & 11 a plurality of said optical modulators.

Regarding claims 6-7, Stern shows in Figs. 1-2 light entering the waveguide (12) with and without collimating lenses (20).

Claim Rejections - 35 USC § 103

11. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

12. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

13. **Claims 8 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Stern.**

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Regarding claim 8, the previous remarks concerning claims 1-4 and 6-7 are incorporated herein.

Thus, Stern differs from claim 8 in that Stern does not expressly teach using his optical modulator with an imaging optical system to focus the light emitted from the optical waveguide at a predetermined location.

However, Stern teaches that his device has other applications besides display devices. See column 47, lines 26-38. Furthermore, it is well known to use some type of optical system (such as a lens) to focus light from a waveguide at a predetermined location.

The ordinary skilled artisan would have found it desirable to add focusing optics to Stern for use in a switching device which couples light from the waveguide (12) to an optical fiber, for example.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the claimed invention to modify Stern to obtain the invention specified by claim 8.

Regarding claim 9, the previous remarks concerning claims 1-4 and 6-7 are incorporated herein.

Thus, Stern differs from claim 9 in that Stern does not expressly teach using his optical modulator as part of an exposure head for use with a scanning device.

However, Stern teaches that his device has other applications besides display devices, such as optical switches. See column 47, lines 26-38. The use of optical switches in scanning devices is well known in the art.

The ordinary skilled artisan would have wanted to use Stern's device in an exposure head for a scanning device because the device of Stern is said to have a high switching speed which would be desirable for scanning applications in general. See column 47, lines 39-45.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the claimed invention to modify Stern to obtain the invention specified by claim 9.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Omar Rojas whose telephone number is (703) 305-8528 and whose e-mail address is *omar.rojas@uspto.gov*. The examiner can normally be reached on Monday-Friday (7:00AM-3:00PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hemang Sanghavi, can be reached on (703) 305-3484. The fax phone number for the organization where this application or proceeding is assigned is (703) 308-7722 for regular communications. The examiner's personal work fax number is (703) 746-4751.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

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Omar Rojas
Patent Examiner
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or
June 3, 2003



HEMANG SANGHAVI
PRIMARY EXAMINER